

### Programmes Scheduled in March 2023

S. No.	Programme	Date	Coordinator
1	Digital Forensics	13 - 15	Dr. B. M. Mehtre
2	Role of Micro Services in Developing Scalable Applications	13 - 15	Dr. V. Radha
3	Financial Forecasting using AI/ML in Banks	13 - 17	Dr. V. Ravi
4	Mobile and Social Media Services for Secure Banking and Financial Sector	13 - 17	Dr. V. N. Sastry
5	Cloud Adoption in Banking & Financial Sector	13 - 17	Dr. P. Syam Kumar
6	Digital Payment Security Controls	14 - 16	Dr. N. P. Dhavale
7	Malware Analysis	15 - 17	Dr. Rajarshi Pal
8	Post Quantum Cryptography	27 - 29	Dr. P. Syam Kumar
9	Cyber Security Guidelines	27 - 29	Dr. Dipanjan Roy
10	Re-imagining Customer Engagement with Conversational Chatbots	27 - 29	Dr. Mridula Verma

Please visit our website for more details at : <https://www.idrbt.ac.in/offline-programmes>

### Programme Office

Please contact our Programme Office for organizing Customized Programmes and/or any other queries related to programmes:

**Mr. K. Srinivas**  
Administrative Executive

**Mr. D. Chaitanya**  
Administrative Executive

Institute for Development and Research in Banking Technology  
Castle Hills, Road No. 1, Masab Tank, Hyderabad - 500 057, India.

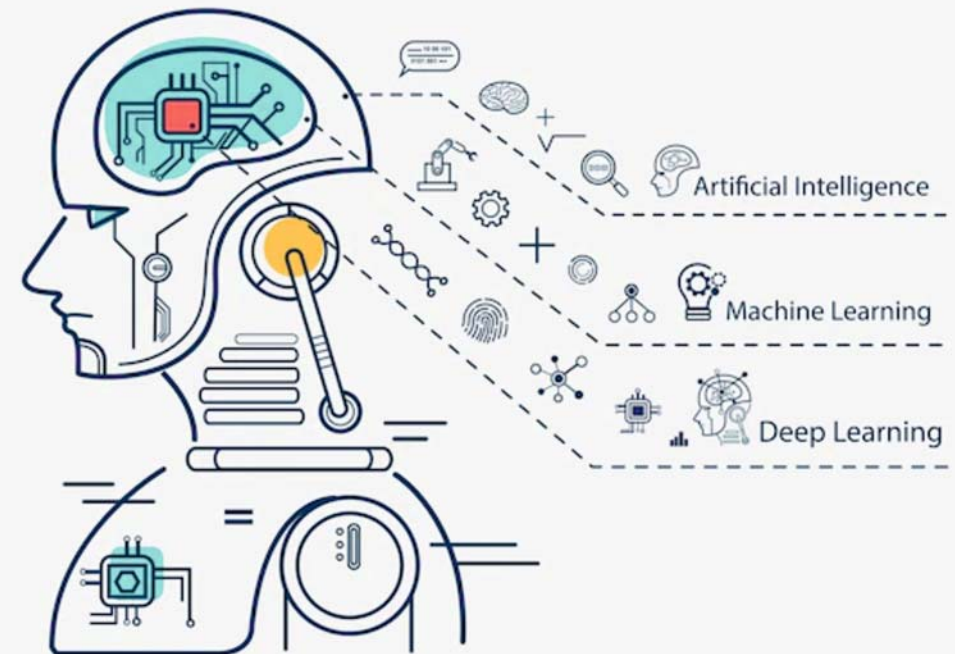
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# Financial Forecasting using AI/ML

**Coordinator: Dr. V. Ravi**

**MARCH 13 – 17, 2023**



# Financial Forecasting using AI/ML

March 13 - 17, 2023

Coordinator: Dr. V. Ravi, Professor, IDRBT | e-mail: [v ravi@idrbt.ac.in](mailto:v ravi@idrbt.ac.in)

## Introduction

From time immemorial, forecasting, being one of the tasks of data mining, played a crucial role in finance (subsuming, banking, insurance and stock markets) apart from other disciplines. Many important problems in finance collapse into regression problems, where the primary objective is to forecast a target variable/feature given a set of independent variables/features. Foreign Exchange rate (aka FOREX) forecasting, interest rate forecasting, gold price forecasting, inflation forecasting, GDP forecasting, stock market forecasting etc. are examples of such problems. Statistical models such as simple linear regression, multiple linear regression, polynomial regression, intrinsically linear regression, LASSO, ridge regression, logistic regression, auto regressive moving average (ARMA) models, Box-Jenkins methodology etc. are some of the earliest and most successful methods for solving the afore-mentioned forecasting problems. However, with the advent of neural networks (NN), especially, multilayer perceptron (MLP) in 1986, the scene of forecasting has changed forever. Several NN architectures have been proposed to tackle difficult, non-linear forecasting problems. Apart from NN, other machine learning techniques including deep learning also contributed to the ever-expanding repertoire of methods to solve forecasting problems.

This course is designed to impart a brief introduction to Python programming language, followed by a decent exposure to the afore-mentioned techniques and rigorous hands-on exercises on using these methods to solving a bunch of important forecasting problems via Python.

## Objectives

- \* To make the participants aware of the new developments in this field and influence them to join the bandwagon for overall growth of the banking industry
- \* To convince the with use cases, case of studies, best practices in Indian banks and PoCs conducted at the Centre of Excellence in Analytics, IDRBT.

## Contents

- \* Introduction to Applied statistics
- \* Introduction to Data science (AI/ML subsumed)
- \* Introduction Time series forecasting- basic and advanced
- \* Introduction to DS (AI/ML subsumed) algorithms
- \* Introduction to Python-Numpy, Pandas, Scikit learn
- \* Hands-on exercises on FOREX forecasting, Stock market forecasting, stock market movement forecasting, Inflation forecasting, Gold price forecasting using Python.

## Who Can Participate?

Officers and executives up to and including AGM level from the analytics division, data warehouse, IT department, digital banking, transaction banking, planning, marketing, SOC and cyber security divisions. Should be a Science/Engineering/Management graduate/postgraduate with no prior knowledge of Python.

## End Use

- \* Participants shall be introduced to this exciting field with numerous examples and, several concepts will be demystified.
- \* Participants can help write the RFP in the respective areas using AI/ML & Data Science.
- \* They will be ready to be drafted into the full-fledged projects on this subject in the bank.
- \* They can ask the vendors pertinent and pointed questions.

## Fee Details

### Domestic Participants from

- \* RRBs & Coop Banks : Rs. 59,000/- (Rs. 50,000/- + 18% GST)
- \* All other Banks & FIs: Rs. 70,800/- (Rs. 60,000/- + 18% GST)

### Foreign Participants from

- \* SAARC Countries : US\$1180/- (US\$ 1000/- + 18% GST)
- \* Other Countries : US\$ 1770/- (US\$ 1500/- + 18% GST)

The fees for our programmes can be remitted through NEFT and the bank account details for fee payment available at: <https://bit.ly/3PXGK35>.

## Bank Account Details for Remittance of Fees

Account Name : IDRBT  
Bank : Axis Bank Limited  
Branch : Humayun Nagar (Mehdipatnam Ring Road) Branch, Hyderabad  
Account Number : 426010100018823  
IFSC Code : UTIB0000426  
GSTIN : 36AAAAI0204K1Z4.

## Nominations

Nominations should be sent to us latest by **March 07, 2023** by email to [program@idrbt.ac.in](mailto:program@idrbt.ac.in)

While nominating, please provide the details of the participants (Name, Designation, Bank, Mobile No / Phone No., email address) along with the nominating authority details (Name, Designation, Bank, Mobile No / Phone No., email address, Fees billing address, GST No. of the bank).

## Venue & Timings of Programme

Venue: IDRBT Timings: 9.30 AM to 5.30 PM

## How to Reach IDRBT

A major landmark near Masab Tank flyover is NMDC. IDRBT is located just behind NMDC. Google Pin: <http://bit.ly/IDRBT>

## Accommodation and Travel Plans

The boarding & lodging arrangements will be made at IDRBT, Hyderabad. The participants will be provided single occupancy a/c rooms.

Check-in : From 3.00 PM on Sunday, March 12, 2023.

Check-out : 7.00 AM on Saturday, March 18, 2023.